REMARKS

Applicant is in receipt of the Office Action mailed May 18, 2005. Claims 1, 24, 31, 54, 61, and 68-90 have been amended. Claims 1-90 are pending in the case. Reconsideration of the present case is earnestly requested in light of the following remarks.

Objections

Claims 68-90 were objected to for use of the term "carrier medium", which was not supported in the specification. Per the Examiner's suggestion, Applicant has amended these claims to instead refer to "memory medium". Removal of the objection to these claims is respectfully requested.

Provisional Double Patenting Rejection

Claims 1-90 were provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-90 of co-pending Application No. 10/051,421. Per the telephone conversation between Mark S. Williams (Reg. No. 50,658) and the Examiner conducted on August 17, 2005, Applicant has Expressly Abandoned (via facsimile) co-pending Application No. 10/051,421, thus rendering the provisional rejection moot.

Section 103 Rejections

Claims 1-90 were rejected under 35 U.S.C. 103(a) as being unpatentable over Keeler et al. (USPN 5,729,661, "Keeler") in view of "Sparse Bayesian Learning and the Relevance Vector Machine, June 2001, by Michael J. Tipping ("Tipping"). Applicant respectfully disagrees.

As the Examiner is certainly aware, to establish a prima facie obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP 2143.03. Obviousness cannot be established by combining or modifying the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion or incentive to do so. In re Bond, 910 F. 2d 81, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990). Moreover, as held by

the U.S. Court of Appeals for the Federal Circuit in Ecolochem Inc. v. Southern California Edison Co., an obviousness claim that lacks evidence of a suggestion or motivation for one of skill in the art to combine prior art references to produce the claimed invention is defective as hindsight analysis.

In addition, the showing of a suggestion, teaching, or motivation to combine prior teachings "must be clear and particular . . .. Broad conclusory statements regarding the teaching of multiple references, standing alone, are not 'evidence'." *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999). The art must fairly teach or suggest to one to make the specific combination as claimed. That one achieves an improved result by making such a combination is no more than hindsight without an initial suggestion to make the combination.

Amended claim 1 recites:

1. A system for preprocessing input data for a support vector machine, comprising:

a support vector machine, wherein the support vector machine comprises multiple inputs, and wherein each input is associated with a respective portion of input data;

an input buffer for receiving and storing the input data, the input data associated with at least two of the inputs being on different time scales relative to each other;

a time merge device for selecting a predetermined time scale and reconciling the input data stored in the input buffer such that all of the input data for all of the inputs are on the same time scale; and

an output device for outputting the data reconciled by the time merge device as reconciled data, said reconciled data comprising the input data to the support vector machine;

wherein the support vector machine is operable to receive the reconciled data as input data to the multiple inputs, and to generate output data in accordance with the reconciled data.

Applicant submits that Keeler fails to teach or suggest "a support vector machine, wherein the support vector machine comprises multiple inputs, and wherein each input is

associated with a respective portion of input data" ... "wherein the support vector machine is operable to receive the reconciled data as input data to the multiple inputs, and to generate output data in accordance with the reconciled data", as recited in claim 1. Applicant notes that Keeler is specifically directed to operation and use of neural networks, and preprocessing input data therefor, and nowhere teaches or suggests, or even hints at, a support vector machine, and so fails to teach at least these features of claim 1.

As to Tipping, Applicant notes that per the Abstract, Tipping is directed to "a general Bayesian framework for obtaining *sparse* solutions to regression and classification tasks utilizing models linear in the parameters" and illustrates the approach using a specialized form of support vector machine (SVM) called a *relevance vector machine* (RVM). Applicant notes that while Tipping mentions multiple input variables for an SVM, it is in the context of using multiple input scale parameters within kernels or other basis functions, and more specifically, as part of a demonstration of "the potential of two advantageous features of the sparse Bayesian approach: the ability to utilize arbitrary basis functions, and the facility to direct "optimise" parameters within the kernel specification, such as those which moderate the input scales." (p. 223, first paragraph).

Applicant respectfully reminds the Examiner that per *Uniroyal, Inc. v. Rudkin Wiley Corp.*, 837 F.2d 1044, 1051 52, 5 USPQ 2d 1434, 1438 (Fed. Cir. 1988), it is impermissible to reconstruct the claimed invention from selected pieces of prior art absent some suggestion, teaching, or motivation in the prior art to do so. Similarly, per *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227 USPQ 543, 551 (Fed. Cir. 1985), it is insufficient to select from the prior art the separate components of the inventor's combination, using the blueprint supplied by the inventor.

Applicant notes that Keeler nowhere suggests the desirability of preprocessing the data to a common time scale for input to a support vector machine, and in fact, never even mentions support vector machines. Similarly, Tipping nowhere suggests or hints at the desirability of preprocessing input data to a common time scale for a support vector machine. Applicant respectfully submits that the Examiner has simply selected particular features from each cited reference (absent any teaching or suggestion in the references to do so), using Applicant's claims as a blueprint, which is improper.

Moreover, Applicant respectfully submits that since Keeler is specifically directed to neural networks, and Tipping is particularly directed to "Sparse Bayesian Learning and the Relevance Vector Machine" (title), one of ordinary skill in the art would not have been motivated to seek out these two references, nor to make the alleged combination based on these references to produce Applicant's invention as claimed. Applicant notes that the motivation suggested by the Examiner to combine Keeler with Tipping is "because the key feature of the Support Vector Machine (SVM) is that, in the classification case, its target function attempts to minimize a measure of error on the training set while simultaneously maximizing the 'margin' between the two classes (in the feature space implicitly defined by the kernel)". Applicant submits that this is simply a description of the training of an SVM for a classification task, and is not a proper motivation for making the alleged combination. Thus, Applicant respectfully submits that neither Keeler nor Tipping provides a motivation to combine, and that the Examiner's attempt to combine Keeler and Tipping for a prima facie case of obviousness is improper.

Thus, for at least the reasons provided above, Applicant respectfully submits that Keeler and Tipping, taken singly or in combination, fail to teach or suggest all the features and limitations of claim 1, and so claim 1 and those claims dependent therefrom are patentably distinct and non-obvious over the cited art, and are thus allowable.

Independent claims 24, 31, 54, 61, and 68 include similar limitations as claim 1, and so the above arguments apply with equal force to these claims. Thus, for at least the reasons provided above, Applicant submits that claims 24, 31, 54, 61, and 68, and those claims respectively dependent therefrom, are patentably distinct and non-obvious over the cited art, and are thus allowable. Removal of the 103 rejection of claims 1-90 is respectfully requested.

Applicant also asserts that numerous ones of the dependent claims recite further distinctions over the cited art. However, since the independent claims have been shown to be patentably distinct, a further discussion of the dependent claims is not necessary at this time.

CONCLUSION

Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 50-1505/5650-02000/JCH.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

☐ Request for Approval of Drawing Changes

☐ Notice of Change of Address

☐ Check in the amount of $ for fees ( ).

☐ Other:

Respectfully submitted,

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